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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/019,614	02/06/1998	ARI KOSKI	460-007777-U	2231

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FAIRFIELD, CT 06430

EXAMINER

GRIER, LAURA A

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 12/12/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/019,614

Applicant(s)

KOSKI ET AL.

Examiner

Laura A Grier

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-30 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

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DETAILED ACTION

1. The final rejection of paper no. 15 has been withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1-4 and 10-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al. in view of Barabash et al., U. S. Patent No. 6028892.

Regarding **claim 1**, Wong et al. discloses an electronic device with equalized audio accessory and method for same. Wong discloses in figure 2 a portable radio communication an electronic device comprising a DSP (digital signal processor) - reference 206; coupled to an accessory device-reference 120, which constitutes at least one auxiliary device connection for connecting an auxiliary device; the accessory device stores audio parameters (column 3, lines 5-8) that are load into the DSP. However, Wong et al. fails to specifically disclose two-way communication of data. The examiner maintains that such a means of two-way communication was well known in the art.

Regarding the means of two-way communication of the data, in a similar field of endeavor, Barabash et al. (hereinafter, "Barabash") discloses a voice band-based data transmission system. Barabash's disclosure comprises a mobile unit coupled to

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computer and/or an auxiliary device, wherein there is transmitting (or sending) and receiving of data between the mobile unit and a data device (figure 1, and col. 2, lines 7-18).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Wong et al. by incorporating a means for two-way communication of data between the electronic device and the auxiliary device for the purpose of effective transmission of audio data/information from one device to another to acquire the desired optimal performance of the electronic device.

Regarding **claim 2**, Wong et al. and Barabash et al. (hereinafter, "Wong-Barabash") further discloses radio accessory interface-reference 115, accessory device-reference 120 via the RAI for storing audio parameters (column 2, last paragraph) that are load into the DSP.

Regarding **claim 3**, Wong-Barabash further discloses radio accessory interface-reference 115 via signal lines 250 and 240 (figure 2) to accessory device-reference 120 with memory-reference 220 for storing audio parameters (column 2, last paragraph) that are load into the DSP.

Regarding **claim 4**, Wong-Barabash further discloses radio accessory interface-reference 115 via signal lines 250 and 240 (figure 2) to accessory device-reference 120 with memory-reference 220 (columns 2, last paragraph – column 3, line 5), which is indicative of a detection line and a connection bus transferring information between the electronic device and accessory device.

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Regarding **claim 10**, Wong-Barabash further discloses (column 2, 2nd and last paragraph, column 4, line 40-45) indication of the parameters characterizing the accessory device.

Regarding **claim 11**, Wong-Barabash further discloses the DSP receiving audio parameters from the accessory device (figure 2 and column 3, 2nd paragraph).

4. **Claims 5-9 and 12-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al. in view of Barabash et al.

Regarding **claim 5**, Wong et al. discloses an electronic device with equalized audio accessory and method for same. Wong discloses in figure 2 a portable radio communication an electronic device comprising a DSP (digital signal processor) - reference 206; RAM-reference 207, which constitutes means of storing audio parameters to loaded in the DSP and wherein inherently teaches communication means, coupled to an accessory device-reference 120, which constitutes at least one auxiliary device connection for connecting an auxiliary device; the accessory device stores audio parameters (column 3, lines 5-8) that are load into the DSP. However, Wong et al. fails to specifically disclose two-way communication of data. The examiner maintains that such a means of two-way communication was well known in the art.

Regarding the means of two-way communication of the data, in a similar field of endeavor, Barabash et al. (hereinafter, "Barabash") discloses a voice band-based data transmission system. Barabash's disclosure comprises a mobile unit coupled to computer and/or an auxillary device, wherein there is transmitting (or sending) and

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receiving of data between the mobile unit and a data device (figure 1, and col. 2, lines 7-18).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Wong et al. by incorporating a means for two-way communication of data between the electronic device and the auxiliary device for the purpose of effective transmission of audio data/information from one device to another to acquire the desired optimal performance of the electronic device.

Regarding **claim 6**, Wong-Barabash discloses everything claimed as applied above (see claim 5). Wong et al. further discloses radio accessory interface-reference 115 via signal lines 250 and 240 (figure 2) to accessory device-reference 120 with memory-reference 220 (columns 2, last paragraph – column 3, line 5), which is indicative of a detection line and a connection bus transferring information between the electronic device and accessory device.

Regarding **claims 7 and 8**, Wong-Barabash discloses everything claimed as applied above (see claim 5). However, Wong et al. further discloses a transmitter/receiver unit of a mobile station figure 2-reference 110, as well as Barabash in figures 1, 3 and 4-reference 102.

Regarding **claim 9**, Wong-Barabash discloses everything claimed as applied above (see claim 8). Wong et al. discloses an accessory device with a microphone and speaker (figure 1-references 120 and 130).

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Regarding **claim 12**, Wong-Barabash further discloses (column 2, 2nd and last paragraph, column 4, line 40-45) indication of the parameters characterizing the accessory device.

Regarding **claim 13**, Wong-Barabash further discloses the DSP receiving audio parameters from the accessory device (figure 2 and column 3, 2nd paragraph).

5. **Claims 14-17, 23-24 and 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong-et al. in view of Yamada, U. S. Patent No. 5414751.

Regarding **claims 14, and 24**, Wong et al. discloses an electronic device with equalized audio accessory and method for same. Wong discloses in figure 2 a portable radio communication an electronic device comprising a DSP (digital signal processor) - reference 206; coupled to an accessory device-reference 120, which constitutes at least one auxiliary device connection for connecting an auxiliary device; the accessory device stores audio parameters (column 3, lines 5-8) that are load into the DSP. However, Wong et al. fails to specifically disclose a writeable mass storage separate from the processor, the writable mass storage being disposed within the electronic device. The examiner maintains that such a writeable mass storage was well known in the art.

Regarding the writeable mass storage being separate from the processor, in a similar field of endeavor, Yamada discloses a portable telephone apparatus that comprises a DSP-reference 5 and RAM 2-reference 11 disposed within the telephone, wherein the DSP receives data from RAM 2 (col. 3, lines 5-6 and 50-57).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Wong et al. by implementing additional memory in an electronic device for the purpose of storing data for controlling the DSP and further enhancing the transfer of data from one device to another with better efficiency.

Regarding **claim 16**, Wong-Yamada discloses everything claimed as applied above (see claim 14). Wong et al. further discloses radio accessory interface-reference 115 via signal lines 250 and 240 (figure 2) to accessory device-reference 120 with memory-reference 220 for storing audio parameters (column 2, last paragraph) that are load into the DSP.

Regarding **claim 17**, Wong-Yamada discloses everything claimed as applied above (see claim 14). Wong et al. further discloses radio accessory interface-reference 115 via signal lines 250 and 240 (figure 2) to accessory device-reference 120 with memory-reference 220 (columns 2, last paragraph – column 3, line 5), which is indicative of a detection line and a connection bus transferring information between the electronic device and accessory device.

Regarding **claim 23**, Wong-Yamada discloses everything claimed as applied above (see claim 14). Wong et al. further discloses (column 2, 2nd and last paragraph, column 4, line 40-45) indication of the parameters characterizing the accessory device.

Regarding **claim 27**, Wong-Yamada discloses everything claimed as applied above (see claim 14). However, Wong-Yamada fails to specifically disclose the writable

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mass storage as FLASH memory. The examiner takes official notice that FLASH memory was well known in the art.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Wong-Yamada by implementing a writable mass storage by use of FLASH memory wherein, FLASH, FLASH memory is a type of non-volatile memory in which data will not be erased without power, thus providing adequate and permanent storage of the data/parameters, further FLASH memory is a well known storage medium for electronic device in the art of audio signal processing.

6. **Claims 18-22, 25-26 and 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong et al. in view of Yamada.

Regarding **claims 18, and 26**, Wong et al. discloses an electronic device with equalized audio accessory and method for same. Wong discloses in figure 2 a portable radio communication an electronic device comprising a DSP (digital signal processor) - reference 206; coupled to an accessory device-reference 120, which constitutes at least one auxiliary device connection for connecting an auxiliary device; the accessory device stores audio parameters (column 3, lines 5-8) that are load into the DSP. However, Wong et al. fails to specifically disclose a writeable mass storage separate from the processor, the writable mass storage being disposed within the electronic device. The examiner maintains that such a writeable mass storage was well known in the art.

Regarding the writeable mass storage being separate from the processor, in a similar field of endeavor, Yamada discloses a portable telephone apparatus that comprises a DSP-reference 5 and RAM 2-reference 11 disposed within the telephone, wherein the DSP receives data from RAM 2 (col. 3, lines 5-6 and 50-57).

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Wong et al. by implementing additional memory in an electronic device for the purpose of storing data for controlling the DSP and further enhancing the transfer of data from one device to another with better efficiency.

Regarding **claim 19**, Wong discloses everything claimed as applied above (see claim 18). Wong et al. further discloses radio accessory interface-reference 115 via signal lines 250 and 240 (figure 2) to accessory device-reference 120 with memory-reference 220 (columns 2, last paragraph – column 3, line 5), which is indicative of a detection line and a connection bus transferring information between the electronic device and accessory device.

Regarding **claims 20 and 21**, Wong-Yamada discloses everything claimed as applied above (see claim 18). However, Wong et al. further discloses a transmitter/receiver unit of a mobile station figure 2-reference 110.

Regarding **claim 22**, Wong-Yamada discloses everything claimed as applied above (see claim 18). Wong et al. further discloses an accessory device with a microphone and speaker (figure 1-references 120 and 130).

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Regarding **claim 25**, Wong-Yamada discloses everything claimed as applied above (see claim 18). Wong et al. further discloses (column 2, 2nd and last paragraph, column 4, line 40-45) indication of the parameters characterizing the accessory device.

Regarding **claim 28**, Wong-Yamada discloses everything claimed as applied above (see claim 18). However, Wong-Yamada fails to specifically disclose the writable mass storage as FLASH memory. The examiner takes official notice that FLASH memory was well known in the art.

It would have been obvious to one of the ordinary skill in the art at the time the invention was made to modify the invention of Wong-Yamada by implementing a writable mass storage by use of FLASH memory wherein, FLASH, FLASH memory is a type of non-volatile memory in which data will not be erased without power, thus providing adequate and permanent storage of the data/parameters.

7. **Claims 29-30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Wong-Barabash in view of Johansson et al.

Regarding **claims 29-30**, Wong-Barabash discloses everything claimed as applied above (see claims 1 and 5, respectively). However, Wong-Barabash fails to specifically disclose a microcontroller in the accessory device. The examiner maintains that such a microcontroller was well known in the art.

Regarding the microcontroller, in a similar field of endeavor, Johansson et al. discloses a method and apparatus for upgrading cellular mobile telephones. Johansson

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et al.'s disclosure comprises a sum card that constitutes as an accessory device, wherein the sum card comprises a CPU (indicative of an microcontroller) for controlling interaction between the sum card and the telephone (figures 1A and 1B).

It would have been obvious for one the ordinary skill in the art at the time the invention was made to modify the invention of Wong-Barabash by providing a CPU and/or microcontroller to the accessory device for the purpose of enabling the hand-shaking procedure between the two devices, as taught by Johansson et al.

Response to Arguments

10. Applicant's arguments filed on 11/14/01 have been fully considered but they are not persuasive.

Applicant argued that the primary reference, Wong et al., and other references used fail to support/teach the claimed invention, in particular to the limitations of the providing two-way communication between an electronic device and an accessory device, and a writable mass storage being separate from the process disposed within the electronic device. The examiner agrees with the applicant's arguments. Thus the examiner has provided further support of Wong et al. and other references which two-communication (hand-shaking) and the writable mass storage are supported in view of the claimed invention.

Further, the applicant argues that the prior art of Hallikainen et al., U. S. Patent No. 5797102, fails to qualify as prior art because of its issue date in comparison to the priority of the application. Hallikainen et al. has a 102 (e) date of 9/10/1996. The

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present application filing date is 2/6/1998 and a priority date of 2/21/1997. Thus, Hallikainen et al. is an appropriate prior art reference.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura A Grier whose telephone number is (703) 306-4819. The examiner can normally be reached on Monday - Friday, 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231


Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

LAG 
December 7, 2001


FORESTER W. ISEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2700